

TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SA1923

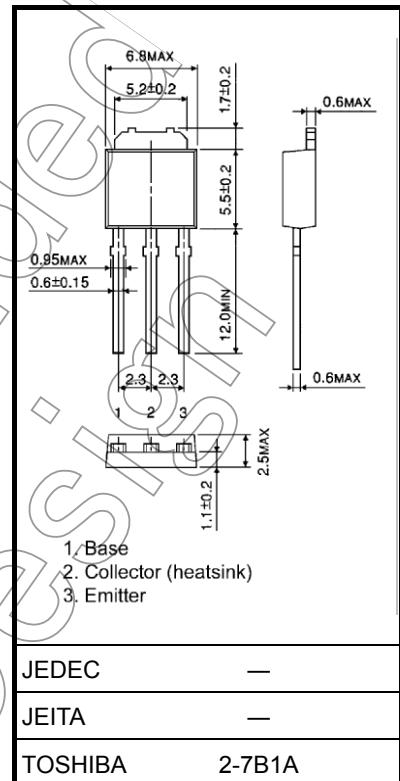
High-Voltage Switching Applications

Unit: mm

- High voltage: $V_{CEO} = -400$ V
- Low saturation voltage: $V_{CE}(\text{sat}) = -1$ V (max)
($I_C = -100$ mA, $I_B = -10$ mA)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-400	V
Collector-emitter voltage	V_{CEO}	-400	V
Emitter-base voltage	V_{EBO}	-7	V
Collector current	DC	I_C	A
	Pulse	I_{CP}	
Base current	I_B	-0.25	A
Collector power dissipation	Ta = 25°C	Pc	W
	Tc = 25°C		10
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55 to 150	°C



Weight: 0.36 g (typ.)

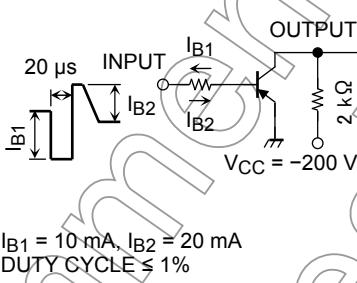
Note 1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

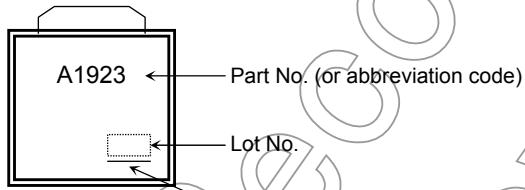
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Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = -400 V, I _E = 0	—	—	-10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -7 V, I _C = 0	—	—	-1	μA
Collector-emitter breakdown voltage	V _{(BR) CEO}	I _C = -10 mA, I _B = 0	-400	—	—	V
DC current gain	h _{FE} (1)	V _{CE} = -5 V, I _C = -20 mA	140	—	450	
	h _{FE} (2)	V _{CE} = -5 V, I _C = -100 mA	140	—	400	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = -100 mA, I _B = -10 mA	—	-0.4	-1.0	V
Base-emitter saturation voltage	V _{BE} (sat)	I _C = -100 mA, I _B = -10 mA	—	-0.76	-0.9	V
Transition frequency	f _T	V _{CE} = -5 V, I _C = -50 mA	—	35	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	—	18	—	pF
Switching time	Turn-on time	t _{on}		0.2	—	μs
	Storage time	t _{stg}		2.3	—	
	Fall time	t _f		0.2	—	



Marking

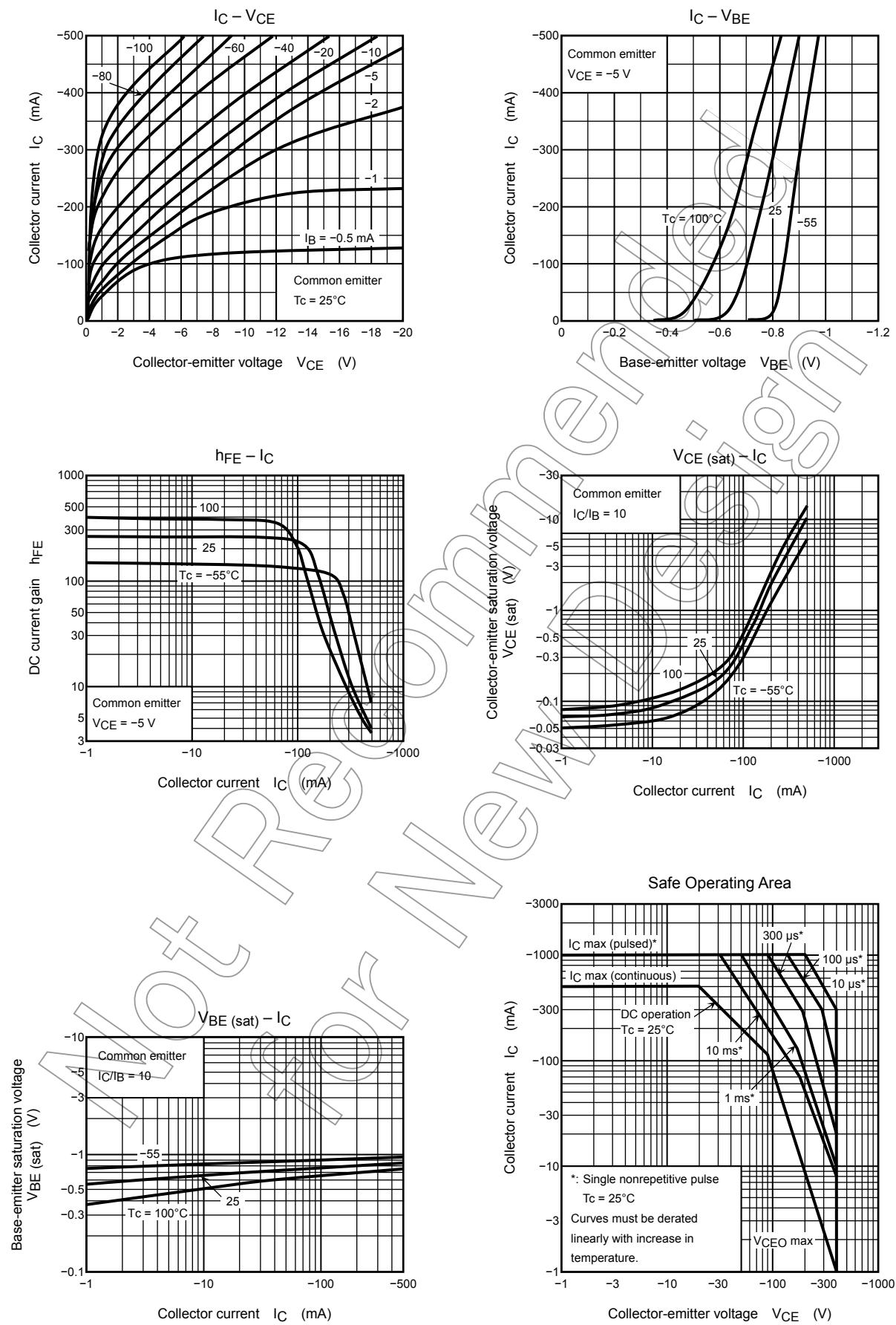


Note 2: A line under a Lot No. identifies the indication of product Labels.

Not underlined: [[Pb]]/INCLUDES > MCV

Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



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